

## **ONLINE MEDICAL STORE**

**A Report of Mini Project work submitted in partial  
Fulfillment of the requirements for the Degree of**

**BACHELOR OF COMPUTER APPLICATION**

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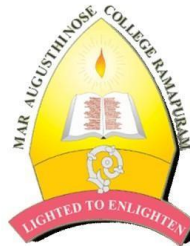
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**CERTIFICATE**

This is to certify that this Project work entitled “**CAR RENTAL**” is a bonafide report of the mini project done by **ABHIN K DAS(Reg No:230021078720)**, **ABHISHEK BABU (Reg No:230021078723)** and **ABEN SHIJO(Reg No:230021078719)** during the academic year 2023-2026 for the partial fulfillment for the award of the Degree of Bachelor of Computer Applications from Mahatma Gandhi University, Kottayam.

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**DECLARATION**

We , **ABHIN K DAS, ABHISHEK BABU and ABEN SHIJO** , hereby declare that the project work Entitled “**ONLINE MEDICAL STORE**” is a record of bonafide project carried out by us under the supervision and guidance of **Mr. SHIBU KALLERAKAL MCA** , Assistant Professor , Department of Computer Science , Mar Augusthinose College , Ramapuram. We also declare that it has not been previously submitted for the award of any Degree, Diploma or similar titles by any University or similar other institutions.

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Place : Ramapuram Date  
:

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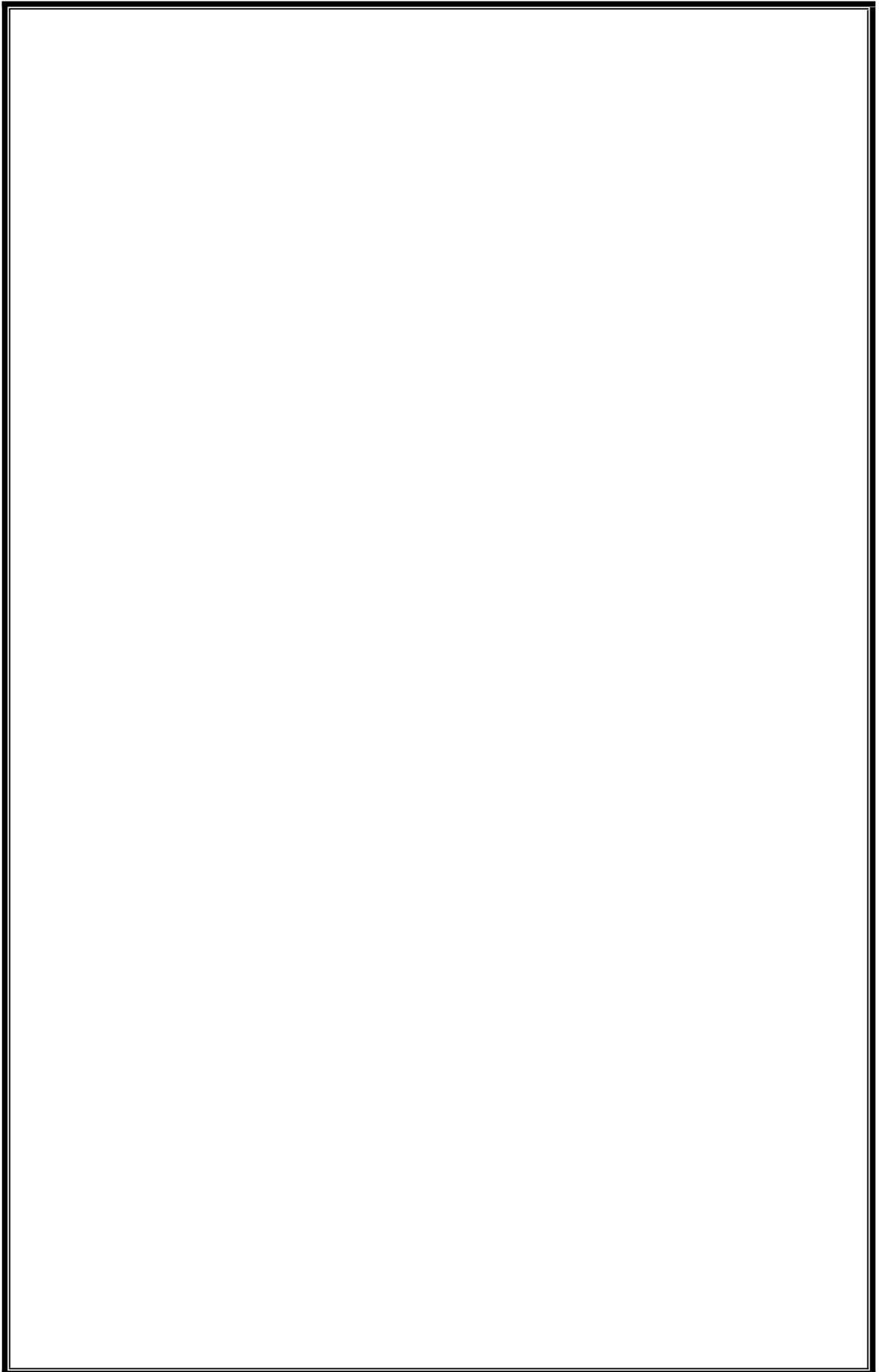
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### **ABSTRACT**

This project aims to develop an **Online Medical Store** that provides users with a convenient and reliable platform to purchase medicines and healthcare products. The system will feature a wide range of products, from prescription medicines to over-the-counter drugs and wellness items, catering to the needs of different customers. Users can easily search for medicines, compare prices, place orders, and make secure online payments through a seamless interface. The platform will also manage prescriptions, order confirmations, and delivery tracking, offering a comprehensive solution for both customers and pharmacy businesses. By digitizing the medical supply process, this platform enhances accessibility to essential healthcare products while helping pharmacies manage inventory, sales, and customer service more effectively.

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## INTRODUCTION



## 1. INTRODUCTION

### 1.1 GENERAL INTRODUCTION

Healthcare is one of the most essential needs of society, and timely access to medicines plays a vital role in ensuring well-being. Traditionally, people purchase medicines directly from physical pharmacies, which may cause challenges such as limited availability of specific drugs, time constraints, or lack of transparency in pricing. With the rapid growth of digital technologies and e-commerce, online medical stores have emerged as a convenient solution to overcome these challenges.

An **Online Medical Store** provides a digital platform where users can easily browse, compare, and purchase medicines and healthcare products from the comfort of their homes. Such platforms typically offer a wide range of items, including prescription drugs, over-the-counter medicines, healthcare equipment, and wellness products. By integrating features like digital prescriptions, secure payment gateways, and real-time delivery tracking, online medical stores ensure both convenience and reliability for customers.

For pharmacy businesses, an online platform also brings benefits such as efficient inventory management, wider customer reach, and automated sales processes. Moreover, it reduces the operational costs of running a physical store while offering customers 24/7 access to essential healthcare products.

Thus, the development of an Online Medical Store not only enhances customer experience by providing fast and reliable access to medicines but also modernizes the way pharmacies manage their services, making healthcare more accessible and efficient.

### 1.2 SOFTWARE INTRODUCTION

The **Online Medical Store** is developed as a web-based application that leverages modern software technologies to provide a seamless, secure, and user-friendly platform for healthcare product purchases. The system is designed to ensure efficient management of medicines, prescriptions, and customer interactions while offering a smooth shopping experience to users.

The software consists of two main modules:

1. **User Module** – Allows customers to register, browse medicines, upload prescriptions, place orders, make payments, and track deliveries.
2. **Admin/Pharmacy Module** – Enables the pharmacy to manage product listings, update stock, verify prescriptions, process orders, and monitor sales and reports.

To implement these features, the project makes use of:

- **Frontend Technologies** such as HTML, CSS, and JavaScript for designing an interactive and responsive user interface.

- **Backend Technologies** like PHP (depending on your stack) for handling business logic, database operations, and user authentication.
- **Database** (MySQL) for storing details of medicines, users, prescriptions, and transactions.
- **Security Measures** such as encrypted passwords and secure payment gateways to protect user data.

The software is structured to be scalable and flexible, allowing easy integration of additional features such as AI-based medicine recommendations, chatbot support, and multi-vendor pharmacy support in the future.

By combining user-friendly design with robust backend functionalities, this software serves as a comprehensive digital solution for managing and delivering medical services efficiently.

## 1.3SYNOPSIS

### Title:

Online Medical Store

### Introduction:

The Online Medical Store is a web-based platform designed to provide customers with an easy and efficient way to purchase medicines and healthcare products online. With the growing demand for digital healthcare solutions, this system allows users to browse, search, and order required medicines from the comfort of their homes. The platform not only benefits customers by saving time and providing convenience but also supports pharmacy businesses by streamlining inventory management and sales processes.

### Problem Statement:

Traditional medical stores often face challenges such as limited availability of medicines, time constraints for customers, lack of 24/7 service, and manual record-keeping for pharmacies. Customers may also struggle with price transparency and accessibility to required drugs. Hence, there is a need for a digital platform that ensures easy access to medicines, secure transactions, and reliable delivery services.

### Objectives:

The main objectives of the project are:

- To develop a user-friendly web application for purchasing medicines and healthcare products online.
- To provide a secure system for managing prescriptions and online payments.
- To enable pharmacy administrators to manage product listings, stock, and customer orders efficiently.
- To enhance accessibility of medicines for customers anytime, anywhere.

### Scope of the Project:

The proposed system caters to two types of users:

- **Customers:** Can register, browse medicines, upload prescriptions, place orders, make payments, and track deliveries.
- **Admin/Pharmacy:** Can manage stock, verify prescriptions, update prices, confirm orders, and generate sales reports.

The project will be implemented using modern web technologies such as **HTML, CSS, JavaScript (frontend), PHP/Java/Python (backend), and MySQL (database).**

**Expected Outcome:**

- Customers will have quick, reliable, and 24/7 access to medicines.
- Pharmacies will benefit from digital management of inventory and sales.
- The system will provide a comprehensive and secure online medical service that bridges the gap between customers and pharmacies.

**2.SYSTEM STUDY**

The **System Study** of the Online Medical Store project involves analyzing the existing process of purchasing medicines, identifying its limitations, and designing a modern digital solution that meets the needs of both customers and pharmacy owners.

In the **existing system**, people depend on physical pharmacies to purchase medicines and healthcare products. Customers often face challenges such as the unavailability of specific medicines, time-consuming visits, and the lack of 24/7 service. Pharmacies, on the other hand, rely on manual or semi-digital systems to maintain stock and sales records, which are prone to errors and inefficiencies.

To address these issues, the **proposed system** introduces an Online Medical Store, a web-based application where customers can browse, compare, and purchase medicines from anywhere at any time. It includes features like prescription uploads, secure online payments, order confirmations, and home delivery with tracking. For pharmacy administrators, the system offers tools to manage inventory, update product details, verify prescriptions, process orders, and generate reports.

The **objectives** of the proposed system are to:

- Provide a convenient, user-friendly platform for customers.
- Ensure reliable and secure transactions.
- Reduce manual errors by automating billing and stock management.
- Make medicines accessible to customers round-the-clock.
- Help pharmacies expand their reach and operate more efficiently.

The **advantages** of the Online Medical Store include convenience, accessibility, time savings, transparency in pricing, and efficient digital management. Additionally, it supports scalability, allowing integration of advanced features like AI-based medicine recommendations, chatbot support, and multi-vendor pharmacy networks in the future.

Thus, the system study concludes that by digitizing the medical supply process, the proposed Online Medical Store not only improves the customer experience but also modernizes pharmacy operations, ensuring a reliable, secure, and efficient healthcare service

## 2.1 Existing System

In the existing scenario, customers purchase medicines and healthcare products directly from **physical pharmacies**. This process is completely manual and has several limitations:

- **Limited Availability of Medicines:** Customers may not always find the required medicine in a single pharmacy, forcing them to visit multiple stores.
- **Time-Consuming Process:** Buying medicines requires physically visiting the store, which can be inconvenient for elderly patients, people with mobility issues, or those living in remote areas.
- **Fixed Working Hours:** Pharmacies usually operate only during specific hours, making it difficult to access medicines during emergencies at night or on holidays.
- **Prescription Handling:** For prescription-based drugs, customers must carry and submit physical prescriptions, which can be lost or mismanaged.
- **Manual Record-Keeping:** Stock management, billing, and sales records are often maintained manually or through basic software, which is prone to errors.
- **Lack of Transparency:** Customers have limited access to price comparisons, discounts, or alternative brands, leading to higher costs.

Overall, the existing system is **time-consuming, error-prone, and lacks convenience** for both customers and pharmacy owners. This creates a strong need for a **digital solution** that ensures accessibility, efficiency, and reliability in medicine purchases.

## 2.2 Disadvantages of Existing System

### Disadvantages of the Existing System

1. **Limited Accessibility:** Medicines can only be purchased during pharmacy working hours, which creates difficulties in case of emergencies at night or on holidays.
2. **Geographical Restrictions:** Customers in rural or remote areas may not have easy access to nearby pharmacies.
3. **Unavailability of Medicines:** Specific or rare medicines may not always be available in a single store, forcing customers to visit multiple pharmacies.
4. **Time-Consuming Process:** Customers need to physically travel to the store, wait in queues, and complete the purchase manually, which wastes valuable time.
5. **Manual Record-Keeping:** Stock and sales data are often recorded manually, increasing the chances of human errors and mismanagement.
6. **Lack of Transparency:** Customers cannot easily compare prices, offers, or alternative brands before making a purchase.

7. **Prescription Management Issues:** Customers must carry physical prescriptions, which can get lost, damaged, or misused.
8. **Customer Inconvenience:** Elderly patients, busy professionals, and people with mobility challenges face difficulties in visiting pharmacies regularly.

## 2.3 Proposed System

The proposed system is an **Online Medical Store**, a web-based platform designed to address the limitations of the existing manual pharmacy system. It aims to provide customers with a **convenient, fast, and reliable way to purchase medicines and healthcare products** from anywhere at any time.

Key features of the proposed system include:

- **User-Friendly Interface:** Customers can easily browse medicines, search by name or category, compare prices, and place orders.
- **Digital Prescription Management:** Customers can upload prescriptions online for prescription-based medicines, eliminating the need for physical copies.
- **Secure Online Payment:** Integrated payment gateways ensure safe and hassle-free transactions.
- **Order Confirmation & Tracking:** Customers receive instant confirmation and can track the status of their deliveries in real-time.
- **Admin/Pharmacy Dashboard:** Pharmacy staff can manage inventory, update stock levels, verify prescriptions, process orders, and generate sales reports.
- **24/7 Accessibility:** The platform is available round-the-clock, allowing customers to order medicines anytime.

### Objectives of the Proposed System:

- To make medicine purchasing **quick, convenient, and accessible** to all users.
- To **reduce manual errors** in billing, stock management, and record-keeping.
- To enhance **transparency**, allowing customers to compare prices and avail offers easily.
- To provide pharmacies with **digital tools** to manage operations efficiently.
- To improve **customer satisfaction** by providing timely delivery and secure transactions.

### Advantages of the Proposed System:

- Convenience of online ordering and home delivery.
- Accurate inventory and sales management.
- Secure transactions and data protection.
- Time-saving for both customers and pharmacy staff.
- Ability to scale and integrate advanced features like AI recommendations and multi-pharmacy support in the future.

The proposed system modernizes the medicine purchasing process, providing **efficiency, accessibility, and reliability** for both customers and pharmacies.

## 2.4 Advantages of Proposed System

- **Convenience:** Customers can order medicines anytime, from anywhere, without visiting a physical pharmacy.
- **Time-Saving:** Eliminates the need to travel and wait in queues, making the process faster and more efficient.
- **24/7 Accessibility:** The platform is always available, allowing users to purchase medicines even during emergencies or outside regular pharmacy hours.
- **Secure Transactions:** Integrated payment gateways ensure safe and reliable online payments.
- **Digital Prescription Handling:** Customers can upload prescriptions online, reducing paperwork and errors.
- **Efficient Inventory Management:** Pharmacies can manage stock digitally, reducing the chances of overstocking or stock-outs.
- **Accurate Record-Keeping:** Automatic recording of orders, sales, and customer data reduces human errors.
- **Price Transparency:** Customers can compare prices, view discounts, and choose products that fit their budget.
- **Wider Reach for Pharmacies:** Online availability helps pharmacies reach more customers, including those in remote areas.
- **Scalability:** The system can be expanded with additional features, such as AI-based medicine recommendations, multi-pharmacy integration, or chat support.
- **Customer Satisfaction:** Faster service, timely delivery, and reliable product availability enhance overall user experience.

## 3. SYSTEM ANALYSIS

**System Analysis** involves studying the current system, identifying its shortcomings, and defining requirements for a proposed system to improve efficiency and convenience. For

an **Online Medical Store**, system analysis helps in understanding how a digital platform can enhance access to medicines, automate pharmacy operations, and provide better customer service.

---

## Existing System Analysis

Currently, medicines are purchased from **physical pharmacies**, which poses several challenges:

- Customers must visit the store physically, consuming time and effort.
- Limited working hours restrict accessibility, especially during emergencies.
- Specific medicines may be unavailable, forcing multiple visits.
- Billing and inventory are managed manually or using basic software, which is prone to errors.
- Customers must carry physical prescriptions for prescription-based drugs.
- Limited transparency in pricing and offers.

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## Problem Identification

The main problems of the existing system include:

- **Accessibility Issues:** No 24/7 service.
- **Time-Consuming:** Customers need to visit stores physically.
- **Inventory Management Challenges:** Manual stockkeeping leads to errors.
- **Payment Limitations:** Lack of secure online payment options.
- **Customer Inconvenience:** Elderly, remote, or busy users face difficulties.

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## Proposed System Analysis

The **proposed system**, an Online Medical Store, is a **web-based platform** providing customers with a convenient way to order medicines online and pharmacies with an efficient tool to manage their inventory and sales.

### Key Features:

- **User Module:** Browse/search medicines, upload prescriptions, place orders, make payments, and track delivery.
  - **Admin/Pharmacy Module:** Manage stock, update products, verify prescriptions, process orders, and generate reports.
  - 24/7 accessibility and secure payment system.
  - Automated billing and inventory management.
-



## 3.1 Feasibility Study

### Technical Feasibility

- The project will use **HTML, CSS, JavaScript** for frontend development and **PHP/Java/Python** for backend development.
- **MySQL** or similar relational database will store customer, order, and medicine data.
- Existing hardware and software infrastructure are sufficient.
- Technologies used are well-documented and widely supported, making development feasible.

### Economic Feasibility

- Development cost is moderate and primarily involves software tools and web hosting.
- Reduces operational costs for pharmacies by automating stock management, billing, and reporting.
- Expands customer reach, potentially increasing sales revenue.
- Online platform reduces the need for additional physical staff.

### Operational Feasibility

- System is **user-friendly** for both customers and pharmacy staff.
- Provides 24/7 access, convenient ordering, and home delivery.
- Reduces errors in billing, stock management, and record-keeping.
- Supports scalability for future integration of advanced features like AI-based medicine suggestions, multi-pharmacy support, or chatbots.

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## Benefits of the Proposed System

- Convenience and time-saving for customers.
- Accurate inventory and sales management.
- Secure online payments and prescription handling.
- Transparency in pricing and offers.
- 24/7 accessibility for customers.
- Reduced manual errors and efficient operations for pharmacies.
- Scalable for future enhancements.

**System Analysis** involves studying the current system, identifying its shortcomings, and defining requirements for a proposed system to improve efficiency and convenience. For an **Online Medical Store**, system analysis helps in understanding how a digital platform can enhance access to medicines, automate pharmacy operations, and provide better customer service.

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## 1. Existing System Analysis

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  - 24/7 accessibility and secure payment system.
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## 4. Feasibility Study

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### c. Operational Feasibility

- System is **user-friendly** for both customers and pharmacy staff.
- Provides 24/7 access, convenient ordering, and home delivery.
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- Supports scalability for future integration of advanced features like AI-based medicine suggestions, multi-pharmacy support, or chatbots.

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## 5. Benefits of the Proposed System

- Convenience and time-saving for customers.
- Accurate inventory and sales management.
- Secure online payments and prescription handling.
- Transparency in pricing and offers.
- 24/7 accessibility for customers.
- Reduced manual errors and efficient operations for pharmacies.
- Scalable for future enhancements.

### 3.2 Requirement Specification

**Requirement Specification** defines the functional and non-functional requirements of the system. It provides a clear understanding of what the system should do and how it should perform.

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## Functional Requirements

Functional requirements describe the specific functionalities the system must provide.

### User Module:

1. **User Registration/Login:** Users can create an account or log in securely.
2. **Browse/Search Medicines:** Users can search medicines by name, category, or brand.
3. **View Medicine Details:** Users can see detailed information, including price, dosage, and availability.
4. **Upload Prescription:** Users can upload prescriptions for restricted medicines.
5. **Add to Cart & Place Order:** Users can add items to the shopping cart and place orders.
6. **Payment:** Users can make secure payments through integrated gateways (Credit/Debit, UPI, Wallets).
7. **Order Tracking:** Users can track the status of their orders from confirmation to delivery.
8. **Feedback & Reviews:** Users can provide ratings and reviews for medicines and services.

### Admin/Pharmacy Module:

1. **Admin Login:** Admins can securely log in to manage the system.
2. **Manage Inventory:** Add, update, or remove medicine details including stock, price, and category.
3. **Verify Prescriptions:** Admin can review and approve prescription uploads.
4. **Process Orders:** Admin can confirm, dispatch, and update order status.
5. **Generate Reports:** Admin can generate sales, order, and inventory reports.
6. **Manage Users:** Admin can view and manage registered user accounts.

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## Non-Functional Requirements

Non-functional requirements define the overall system attributes and quality standards.

1. **Performance:** The system should handle multiple users simultaneously without delay.
  2. **Security:** Sensitive data such as user details, prescriptions, and payments must be encrypted and secure.
  3. **Reliability:** The system should ensure accurate order processing and minimum downtime.
  4. **Usability:** The interface should be simple and intuitive for users of all age groups.
  5. **Scalability:** The system should allow future integration of advanced features like AI-based medicine recommendations, multi-pharmacy support, and chatbots.
  6. **Availability:** The system should be accessible 24/7 to customers.
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## Hardware Requirements

- Processor: Intel i3 or above
- RAM: 4GB or higher
- Storage: 250GB HDD or higher
- Internet Connection: Required for online access

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## Software Requirements

- **Frontend:** HTML, CSS, JavaScript
- **Backend:** PHP / Java / Python (depending on your stack)
- **Database:** MySQL / Oracle / MongoDB
- **Server:** Apache / XAMPP / Localhost setup
- **Browser:** Chrome, Firefox, or any modern web browser

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## Users of the System

1. **Customers:** Individuals who want to purchase medicines online.
2. **Admin/Pharmacy Staff:** Responsible for managing inventory, orders, and overall system administration.

### 3.4 Introduction to the frontend and backend

In a web-based application like the **Online Medical Store**, the system is divided into two main parts: the **Frontend** and the **Backend**. These two components work together to provide a seamless experience for both customers and administrators.

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### Frontend (Client-Side)

The **Frontend** is the part of the system that users interact with directly. It is responsible for **design, layout, and user interface (UI)**, ensuring that customers can easily navigate the website and perform actions like browsing medicines, placing orders, or uploading prescriptions.

#### Key Features of Frontend:

- User-friendly interface with clear navigation.
- Pages for browsing medicines, searching products, viewing details, adding items to cart, and placing orders.

- Forms for user registration, login, and uploading prescriptions.
- Display of order status, payment confirmation, and delivery tracking.
- Feedback and review submission pages.

**Technologies Used:**

- **HTML:** To structure the web pages.
- **CSS:** To style the pages and make the design visually appealing.
- **JavaScript:** To add interactivity, validation, and dynamic content.

**Purpose:**

The frontend ensures that the user can **interact easily and efficiently** with the system, providing a smooth and responsive experience.

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## Backend (Server-Side)

The **Backend** is the part of the system that operates **behind the scenes**. It handles all the business logic, database interactions, and server-side operations required for the Online Medical Store to function correctly.

**Key Features of Backend:**

- Processing user requests from the frontend (like placing orders or uploading prescriptions).
- Managing the database, including medicines, users, orders, and transactions.
- Validating user data and ensuring secure login and payment processes.
- Generating reports for the pharmacy admin.
- Handling notifications, order confirmations, and tracking updates.

**Technologies Used:**

- **Server-Side Language:** PHP / Java / Python (depending on project choice)
- **Database:** MySQL (for storing user, product, and order information)
- **Server:** Apache / XAMPP / Localhost for development and testing

**Purpose:**

The backend ensures that all **operations, data management, and business rules** are handled accurately and securely, allowing the frontend to present correct and real-time information to the users.

## 3.4 Stakeholders in This Project

**Stakeholders** are individuals or groups who have an interest in the development, implementation, or use of a system. In the case of the **Online Medical Store**, stakeholders play a crucial role in ensuring that the platform meets its objectives effectively.

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## Customers / Users

- **Description:** Individuals who use the platform to purchase medicines and healthcare products online.
- **Role:**
  - Browse and search for medicines.
  - Upload prescriptions for prescription-based medicines.
  - Place orders, make payments, and track deliveries.
  - Provide feedback or reviews.
- **Importance:** They are the primary users of the system, and the platform is designed to make their shopping experience **convenient, secure, and efficient**.

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## Pharmacy / Admin

- **Description:** The pharmacy staff or administrators responsible for managing the online store.
- **Role:**
  - Manage inventory and update product details.
  - Verify prescriptions uploaded by customers.
  - Process and confirm orders.
  - Generate reports on sales, inventory, and customer activity.
- **Importance:** Ensures smooth operations, accurate inventory management, and timely fulfillment of customer orders.

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## Project Developers / IT Team

- **Description:** The team responsible for designing, developing, and maintaining the system.
- **Role:**
  - Develop frontend and backend components.
  - Ensure secure and efficient database management.
  - Implement features such as user registration, payment gateways, and order tracking.
  - Provide ongoing support and troubleshooting.
- **Importance:** They ensure the system is **functional, reliable, and secure**, and meet all technical and business requirements.

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## Payment Gateway Providers

- **Description:** External entities that facilitate online transactions.

- **Role:**
  - Process secure payments for customer orders.
  - Ensure transactions are encrypted and reliable.
- **Importance:** Enable safe and smooth online payments, which is critical for customer trust.

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## Regulatory Authorities (Optional)

- **Description:** Government or healthcare authorities that regulate the sale of medicines online.
- **Role:**
  - Ensure compliance with legal requirements for online medicine sales.
  - Monitor the system for prescription verification and safety.
- **Importance:** Ensures the platform operates **legally and ethically**.

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### Summary:

The key stakeholders in this project are **Customers, Pharmacy Admins, Developers, Payment Gateway Providers, and Regulatory Authorities**. Each stakeholder plays a vital role in ensuring the **success, usability, security, and compliance** of the Online Medical Store.

## SYSTEM DESIGN



## **4. SYSTEM DESIGN**

### **4.1 INPUT DESIGN**

Input design converts user-oriented inputs to Computer based format, which requires careful attention. The collection of the input data is the most expensive part of the system in terms of the equipment used and the number of people involved. In the input design, data is accepted for computer processing and input to the system is done through mapping via map support or links. Inaccurate input screens need to be designed more carefully and logically. A set of menus is provided which help for better application navigation. While entering data in the input forms, proper validation checks are done and messages will be generated by the system if incorrect data has been entered.

### **4.2 OUTPUT DESIGN**

Outputs are the most important and useful information to the user and to the department. Intelligent output designs will improve the systems relationship with the user and help much in decision making. Outputs are also used to provide a permanent hardcopy of the results for later use.

### **4.3 DATABASE DESIGN**

Database design is the process of producing a detailed data model of a database. This logical data model contains all the needed logical and physical design choices and physical storage parameters needed to generate a design in a data definition language, which can then be used to create a database. A fully attributed data model contains detained attributes for each entry.

The objectives of database design are:

- Data Integration
- Data Integrity
- Data Independence

Several degrees of normalization have to be applied during the process of table design. The major aim of the process of normalization is to reduce data redundancy and prevent losing data integrity. Redundancy refers to unwanted and unnecessary repetition of data.

Data integrity has to be converted at all levels. Poor normalization can create problems related to storage and retrieval of data. During the process of normalization, dependencies can be identified which cause serious problems during

deletion and updating. Normalization also helps in simplifying the structure of tables.

The theme behind a database is to handle the information as an integrated whole thus making access to information easy, quick and inexpensive and flexible for the users. The entire package depends on how the data is maintained in the system. Each table has been designed with a perfect vision. Minor tables have been created which though takes much space facilities for the purpose of querying fast and accurately.

## **NORMALIZATION**

Database Normalization is a technique of organizing the data in the database. Normalization is a systematic approach of decomposing tables to eliminate data redundancy (repetition) and undesirable characteristics like Insertion, Update and Deletion Anomalies. It is a multi-step process that puts data into tabular form, removing duplicated data from the relation tables.

### **First Normal Form**

First normal form (1NF) is a property of a relation in a relational database. A relation is in first normal form if and only if the domain of each attribute contains only atomic (indivisible) values, and the value of each attribute contains only a single value from that domain. The first definition of the term, in a 1971 conference paper by Edgar Codd, defined a relation to be in first normal form when none of its domains have any sets as elements.

First normal form is an essential property of a relation in a relational database. Database normalization is the process of representing a database in terms of relations in standard normal forms, where first normal is a minimal requirement.

First normal form enforces these criteria:

- Eliminate repeating groups in individual tables
- Create a separate table for each set of related data
- Identify each set of related data with a primary key

### **Second Normal Form**

A relation is in the second normal form if it fulfills the following two requirements:

1. It is in first normal form

2. It does not have any non-prime attribute that is functionally dependent on any proper subset of any candidate key of the relation. A non-prime attribute of a relation is an attribute that is not a part of any candidate key of the relation.

Put simply, a relation is in 2NF if it is in 1NF and every non-prime attribute of the relation is dependent on the whole of every candidate key. Note that it does not put any restriction on the non-prime to non-prime attribute dependency. That is addressed in third normal form.

A functional dependency on part of any candidate key is a violation of 2NF. In addition to the primary key, the relation may contain other candidate keys; it is necessary to establish that no non-prime attributes have part-key dependencies on any of these candidate keys.

### **Third Normal Form**

Third normal form (3NF) is a database schema design approach for relational databases which uses normalizing principles to reduce the duplication of data, avoid data anomalies, ensure referential integrity, and simplify data management. It was defined in 1971 by Edgar F. Codd, an English computer scientist who invented the relational model for database management.

A database relation (e.g. a database table) is said to meet third normal form standards if all the attributes (e.g. database columns) are functionally dependent on solely the primary key. Codd defined this as a relation in second normal form where all non-prime attributes depend only on the candidate keys and do not have a transitive dependency on another key.

A hypothetical example of a failure to meet third normal form would be a hospital database having a table of patients which included a column for the telephone number of their doctor. The phone number is dependent on the doctor, rather than the patient, thus would be better stored in a table of doctors. The negative outcome of such a design is that a doctor's number will be duplicated in the database if they have multiple patients, thus increasing both the chance of input error and the cost and risk of updating that number should it change (compared to a third normal form-compliant data model that only stores a doctor's number once on a doctor table).

## 4.4 TABLES

The tables used in this project are mentioned below.

### 1. Table name : MEDICINE

FIELD NAME	DATA TYPE	CONSTRAINTS	SIZE	DESCRIPTION
id	Int	PrimaryKey, Auto_Incriment	255	Url or path name to the image
name	Varchar	Not Null	100	Name of the medicine
price	decimal(10,2)	TEXT	10,2	Detailed description

### 2. Table name :Users

FIELD NAME	DATA TYPE	CONSTRAINTS	SIZE	DESCRIPTION
Id	int	Primary Key	50	Null Unique
Password	varchar	Not Null	100	

**3. Table name : Feedback**

FIELD NAME	DATA TYPE	CONSTRAINTS	SIZE	DESCRIPTION
id	Int	PrimaryKey,Auto increment	11	Unique message ID
name	varchar	Not Null	100	Sender's name
email	varchar	Not Null	100	Sender's email address
message	text	Not Null	—	Contact message content

**4. Table name : admins**

**Description:** used to store admin login details

FIELD NAME	DATA TYPE	CONSTRAINTS	SIZE	DESCRIPTION
id	Int	PrimaryKey,Auto Increment	11	Unique admin ID
username	varchar	Not Null, Unique	50	Admin username
password	varchar	Not Null	255	Encrypted password admin

**5. Table name : users**

**Description:** used to store customer login details

FIELD NAME	DATA TYPE	CONSTRAINTS	SIZE	DESCRIPTION
id	Int	Primary Key, Auto Increment	11	Unique user ID
username	varchar	Not Null, Unique	100	Customer username

FIELD NAME	DATA TYPE	CONSTRAINTS	SIZE	DESCRIPTION
password	varchar	Not Null	255	Encrypted password
phone	varchar	Not Null	20	Customer phone number

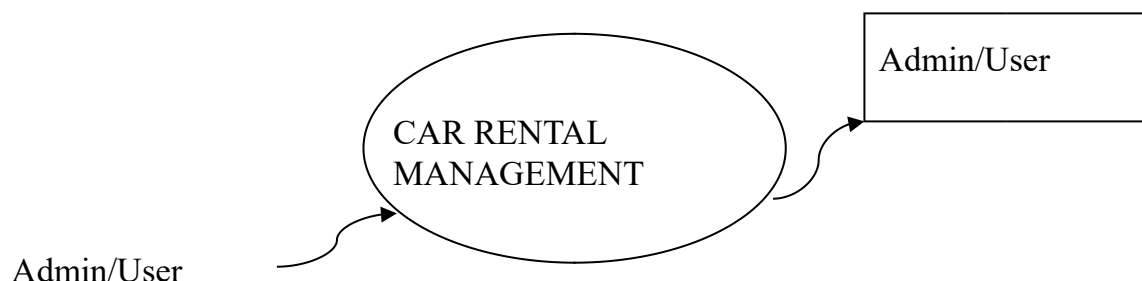
#### 4.5 Data Flow Diagrams

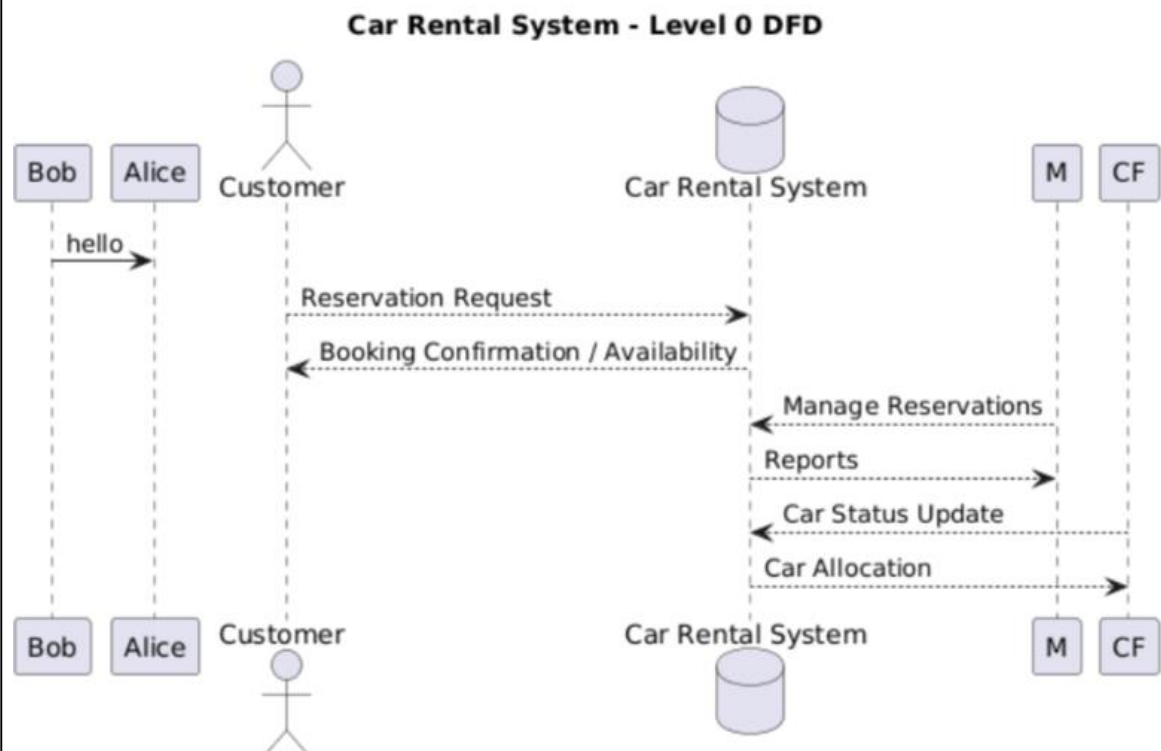
A Data Flow Diagram (DFD) is a graphical representation of the flow of data through an information system, modelling its process aspects. Larry Constantine first developed the DFD as a way of expressing system requirements in a graphical form that led to module design. Often they are preliminary steps used to create an overview of the system which can later be elaborated. DFD's can also be used for visualization of data processing (structured design). So it is the starting point of the design phase that functionally decomposes the requirements specifications down to the lowest level of detail. A DFD consists of a series of bubbles joined by lines and is also known as a "bubble chart".

DFD symbols:

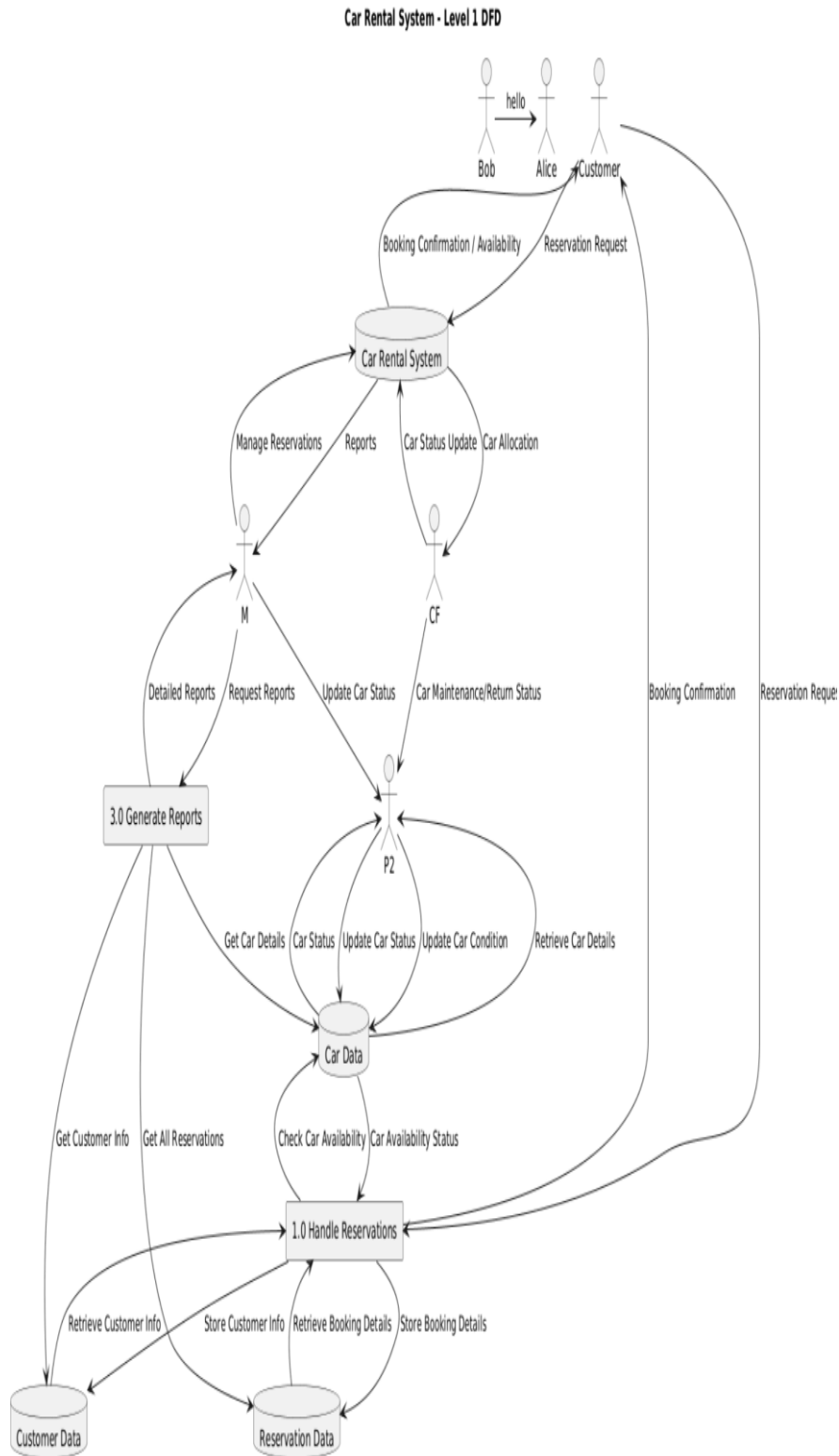
- A system defined source or destination of data
- A arrow identifies data flow, data in motion
- A circle represents the process that transforms incoming data flow to outgoing dataflow
- An open rectangular is data store-data at rest or temporary repository of data

#### CONTEXT DIAGRAM



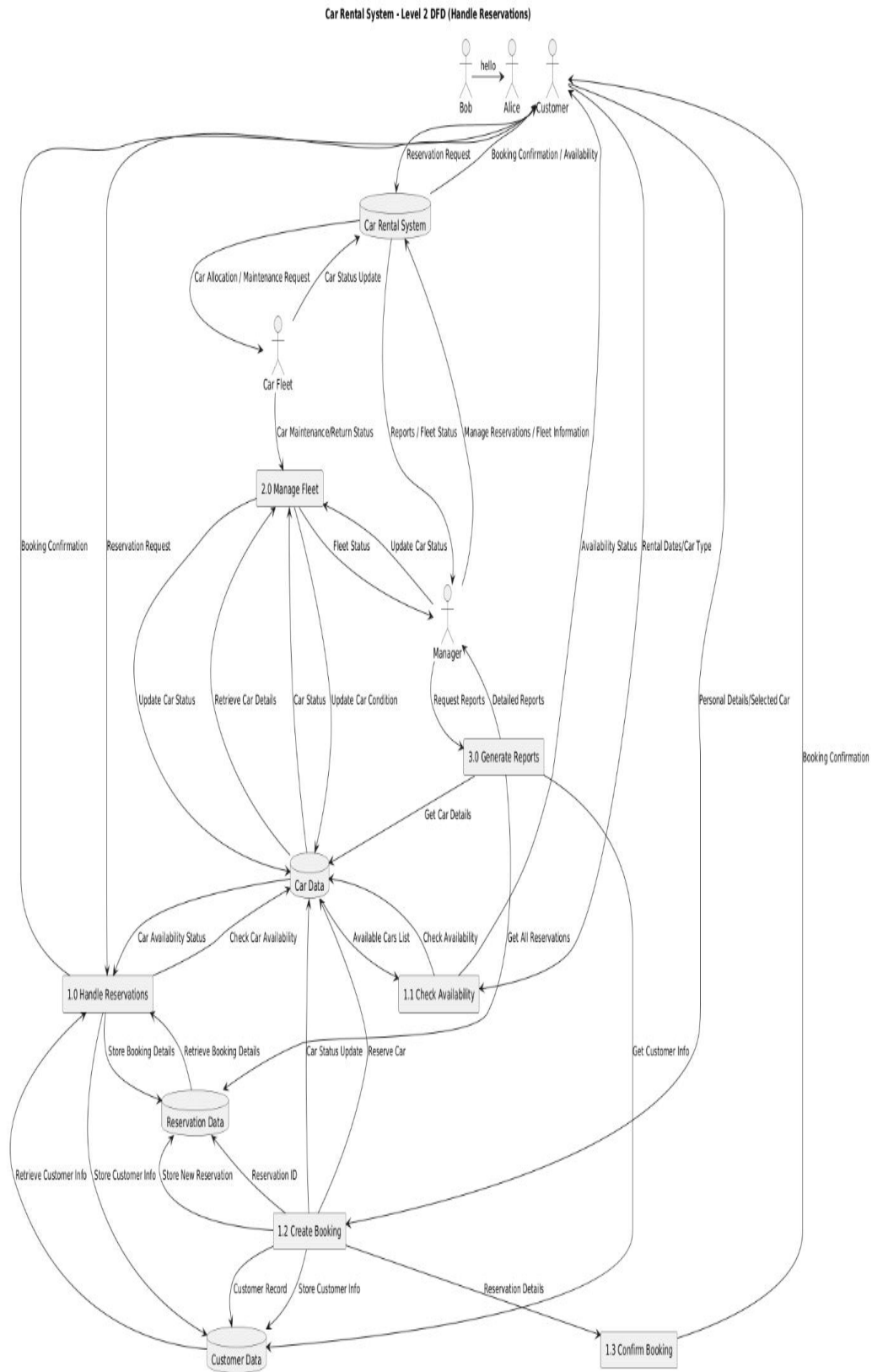
**LEVEL 1 DFD OF CAR RENTAL**

## LEVEL 2 DFD FOR USER AUTHENTICATION





## LEVEL 2 DFD FOR REGISTRATION



## **5. SYSTEM TESTING**

### **5.1 TESTING PROCEDURES**

Software Testing is a critical element of the software development cycle. The testing is essential for ensuring the quality of the software developed and represents the ultimate view of specification, design and code generation. Software testing is designed as the process by which one detects in the software. Testing begins at the module level and works towards the integration of the entire Computer based system.

A good test case is one that has a high probability of finding an as-yet undiscovered error. A successful test is the one that uncovers or finds such errors. If testing is conducted successfully, it will uncover the errors in the software. It also demonstrates that software functions are being performed according to specification and also behavioral and performance requirements are satisfied. For this, test plans have to be prepared. The implementation of a Computer system requires that test data have to be prepared and that the elements are being tested in a planned and efficient manner. Nothing is complete without testing as it is a vital success of the system.

### **5.2 TESTING METHODOLOGY**

The candidate system is subject to a test to determine the response time and security. Different testing methodologies are applied before the system is tested for user acceptance.

## **UNIT TESTING**

Unit testing is the practice of testing small pieces of code, typically individual functions, alone and isolated. If your test uses some external resources, like the network or a database, it's not a unit test.

Unit tests should be fairly simple to write. A unit test should essentially just give the function that's tested some inputs, and then check what the function outputs is correct. In practice this can vary, because if your code is poorly designed, writing unit tests can be difficult. Because of that, unit testing is the only testing method which also helps you write better code – code that's hard to unit test usually has poor design.

In a sense, unit testing is the backbone. You can use unit tests to help design your code and keep it as a safety net when doing changes, and the same method you see

for unit testing are also applicable to the other types of testing. All the other test types are also constructed from similar pieces as unit tests, they are just more complex and less precise.

## **INTEGRATION TESTING**

Integration testing is the phase in software testing in which individual software modules are combined and tested as a group. It occurs after unit testing and before validation testing. Integration testing takes as its input modules that have been unit tested, groups them in large aggregates, applies tests defined in an integration test plan to those aggregates, and delivers as its output the integrated system ready for system testing. The purpose of integration testing is to verify functional, performance, and reliability requirements placed on major design items

## **SYSTEM TESTING**

After the system is put together, system testing is performed. Here the system is tested against requirements to see if all the requirements are met and the system performance as specified by the requirements. System testing is a black box testing technique performed to evaluate the complete system, the system's compliance against specified requirements. In system testing, the functionalities of the system are tested from an end-to-end perspective. System testing is usually carried out by a team that is independent of the development team in order to measure the quality of the system unbiased. It includes both functional and non-functional testing.

## **ACCEPTANCE TESTING**

Finally, an acceptance test is performed to demonstrate to the client, on the real life data of the operations of the system.

## **IMPLEMENTATION AND MAINTENANCE**

## **6. IMPLEMENTATION AND MAINTENANCE**

### **SYSTEM IMPLEMENTATION**

Implementation is the phase where the developed component is installed in the working place. The operation of the software was monitored and the results were recorded. Implementation is the stage of the project where the theoretical design is turned into a working system. This involves careful planning, investigation of the current system and its constraints on implementation, design of methods to achieve the changeover and evolution of change over method.

The problems encountered are converting files, training users, creating accurate files and verifying printouts for integrity. The objective is to put the tested system into operation while holding costs, risks, and personnel irritations to a minimum. It involves creating computer compatible files, training the operational staff and installing terminals and hardware.

### **SYSTEM MAINTENANCE**

Maintenance activities begin where conversion leaves off. Maintenance is handled by the same planning and control used in a project. Maintenance can be classified as corrective, adaptive or preceptive. Corrective measures means repairing processes of performance failures or making changes because of previously corrected problems or false assumptions. Adaptive maintenance means changing the program functions.

Preceptive maintenance Means enhancing the performance or modifying the programs to respond to the user's addition or changing needs. The implementation view of software requirements presents the real world manifestation of processing functions.

In some cases, physical representation is developed as the first step in software design. The analyst must recognize the constraints imposed by the predefined system elements and consider the implementation view of the function and information when such view is appropriate.

## **FUTURE SCOPE OF THE PROJECT**

## 7. FUTURE SCOPE OF THE PROJECT

The proposed system for the **Car Rental** aims to address the challenges faced by traditional rental services and enhance the overall user experience by automating the process. It will simplify the management of vehicles, customer interactions, and bookings. The system will provide features to maintain car categories, manage vehicle details, handle customer requests, and generate booking confirmations. It also offers the flexibility to add or modify content, making it easier for the admin to maintain the rental service.

The future scope of this online car rental project includes the potential to introduce new features that will attract a larger audience. For example, the system could integrate a user review or rating system, allowing customers to leave feedback on cars they've rented. Another enhancement could be adding a wishlist or favorite list, where users can save vehicles they are interested in renting later. Additional functionalities like viewing booking history, tracking rental statuses, would further improve the user experience.

Expanding the platform to support corporate or group rentals, offering subscription-based rental plans, and providing options for long-term leasing could be other future features. As the demand for flexible mobility solutions grows, adding such modules will help in adapting to changing market trends. The system also has the potential to be extended to host virtual car showrooms or allow customers to take virtual test drives, thus offering a dynamic and customer-friendly platform.

## CONCLUSION

## **8. CONCLUSION**

The performance of the proposed system is proved to be efficient enough and satisfies the requirements. The system provides flexibility and facility for incorporating, which may be necessary in future. All the efficiencies of MySQL server were developed to build the power backend table which consists of functionalities like providing constraints, powerful security etc. These were used to make the table more effective. Several HTML, JAVA features were used during many of the front-end applications. This project will help all end users as a user-friendly website.

## **BIBLIOGRAPHY**

## 9. BIBLIOGRAPHY

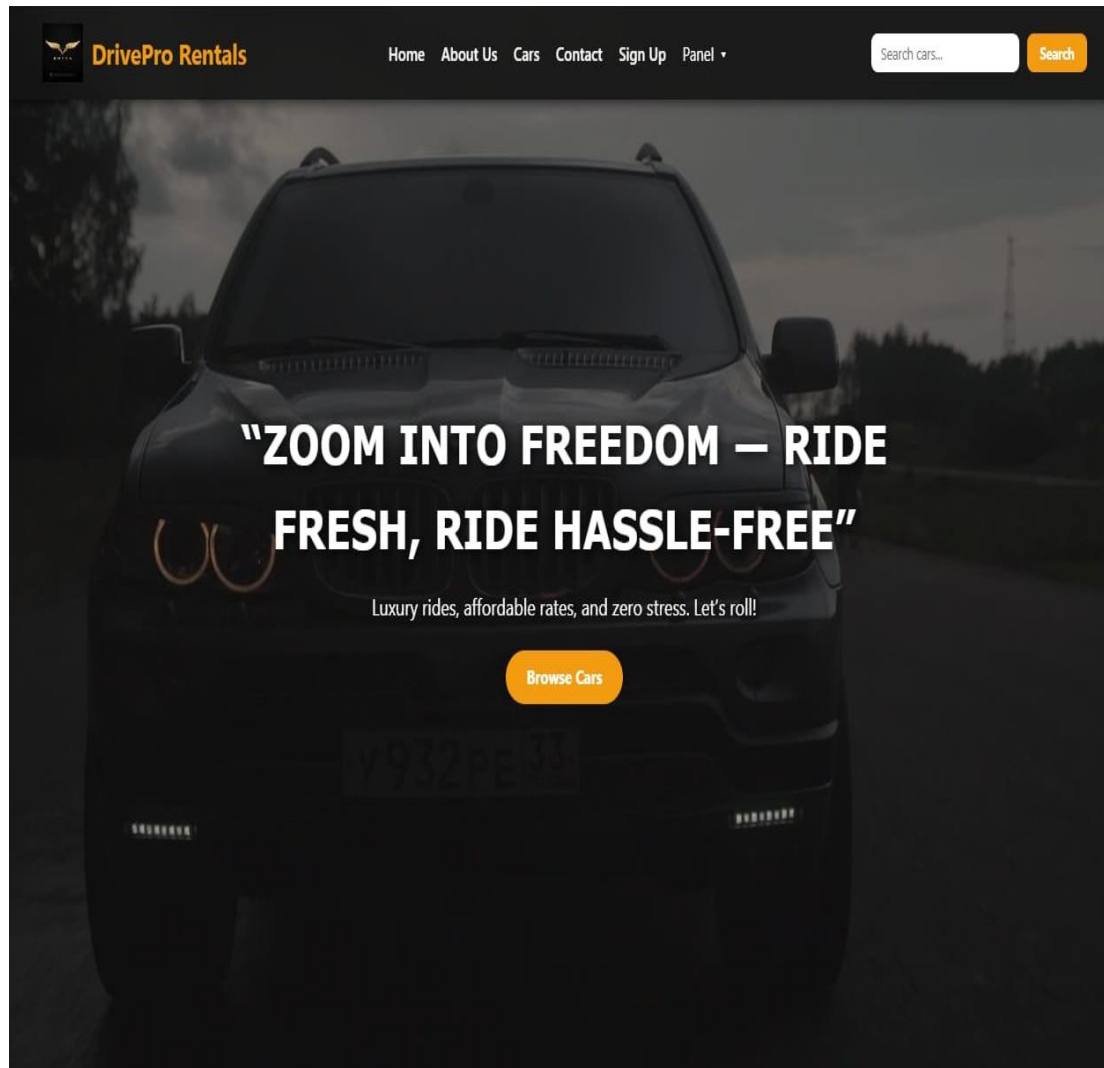
1. “programming PHP” Rasmus LerDorf and Kevin, Tatore Shroff  
Publishers Pvt.Ltd
2. “Database management system” Raghuramakrishnan and Johannes,  
third edition, McGrew-Hill Professional Publication
3. Elias M Award, “System Analysis and Design”, Galgotia  
Publications New Delhi, 2002
4. [www.wikipedia.com](http://www.wikipedia.com)
5. [www.vb.net](http://www.vb.net)
6. [www.w3schools.com](http://www.w3schools.com)



## **SCREENSHOTS**

## CAR RENTAL HOME PAGE

### HOME PAGE




### ADMIN LOGIN PAGE

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**Admin Login**

## CUSTOMER SIGN UP PAGE



 **Create Your Account**  
Username:  
  
Password:  
  
  
⚠ All fields are required!

## ADMIN PANEL

**Admin Panel - DrivePro Rentals**Logout

**Add New Car**

**Car List**

ID	Car Name	Type	Price/Day	Image	Actions
39	BELENO	hatchback	₹3,500.00		<div><input type="text" value="BELENO"/><input type="text" value="hatchback"/><input type="text" value="3500.00"/> <input type="text" value="https://encrypted-tbn0.gstatic.com"/><input type="button" value="Update"/> <input type="button" value="Delete"/></div>
38	INNOVA CRYSTA	MUV	₹7,500.00		<div><input type="text" value="INNOVA CRYSTA"/><input type="text" value="MUV"/><input type="text" value="7500.00"/> <input type="text" value="https://imgd.aepicdn.com/6i"/><input type="button" value="Update"/> <input type="button" value="Delete"/></div>

## CUSTOMER FEEDBACK/CONTACT US SECTION

The image displays the DrivePro Rentals website interface. At the top, there is a navigation bar with the logo and menu items: Home, About Us, Cars, Contact, Sign Up, and Panel. A search bar is located on the right. Below the navigation bar, four car listings are shown in a grid:

- PAJERO SPORT**: Type: suv, ₹6000.00 / day, Book Now
- HYUNDAI CRETA**: Type: SUV, ₹4500.00 / day, Book Now
- INNOVA CRYSTA**: Type: MUV, ₹7500.00 / day, Book Now
- BELENO**: Type: hatchback, ₹3500.00 / day, Book Now

Below the car listings is a 'Contact Us' section with a form containing three input fields: Your Name, Your Email, and Your Message. A 'Send Message' button is positioned below the form. Contact information is provided at the bottom of the section:

Email: support@drivepro.com  
Phone: +91 9123324455  
Location: Green Villa Road, near Oberon Mall, Edappally, Kochi

At the very bottom, a copyright notice reads: © 2025 DrivePro Rentals. All rights reserved.

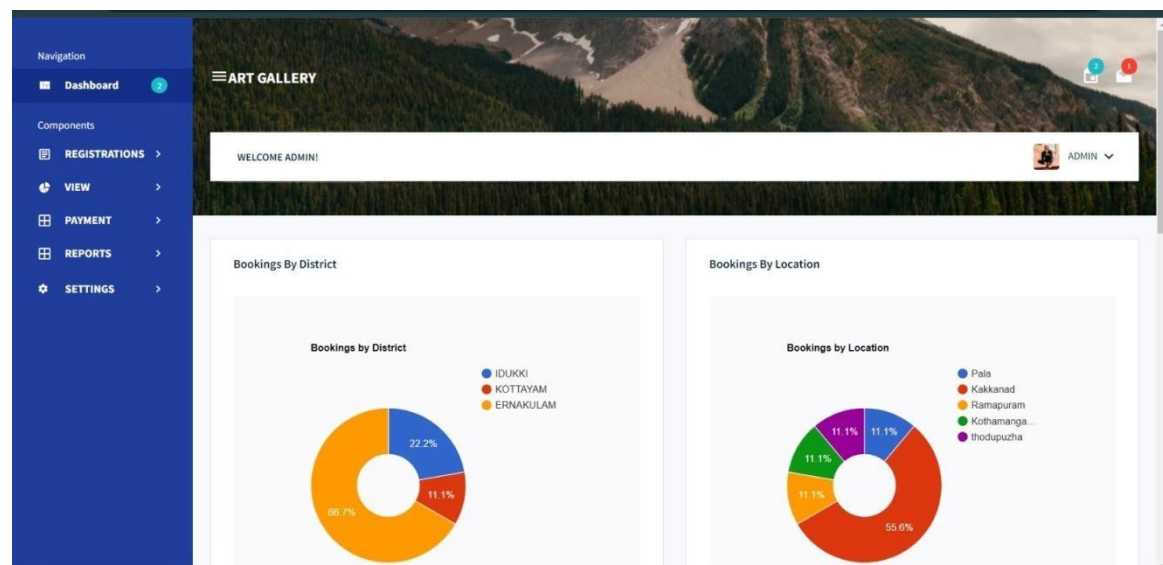
## CUSTOMER LOGIN PAGE

The image shows a 'User Login' form centered on a light blue background. The form has a title 'User Login' and two input fields: 'Username' and 'Password'. Below the password field is a green 'Login' button.

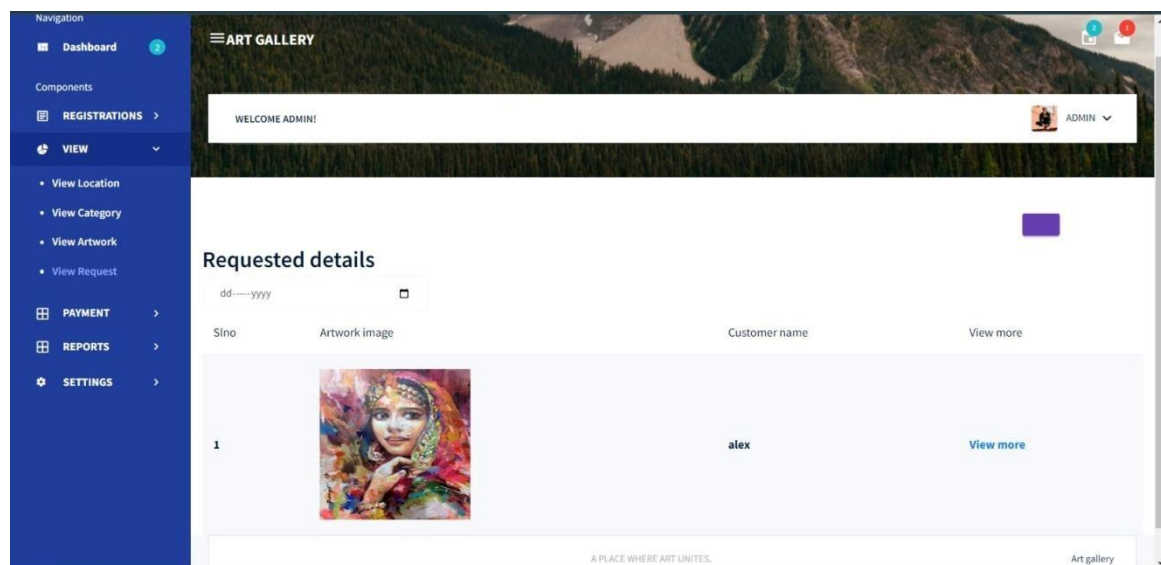
## CUSTOMER LOGIN PAGE

The screenshot shows the 'CUSTOMER LOGIN' page of the ART GALLERY website. The header includes the email 'artgallery@gmail.com', phone number '9876543210', and social media links for Twitter and Instagram. The navigation bar has links for Home, Customer Registration, Login, and Contact. The main content area features a large 'CUSTOMER LOGIN' title, followed by input fields for 'Username' (containing 'username') and 'Password' (containing 'password'), and an orange 'Login' button.

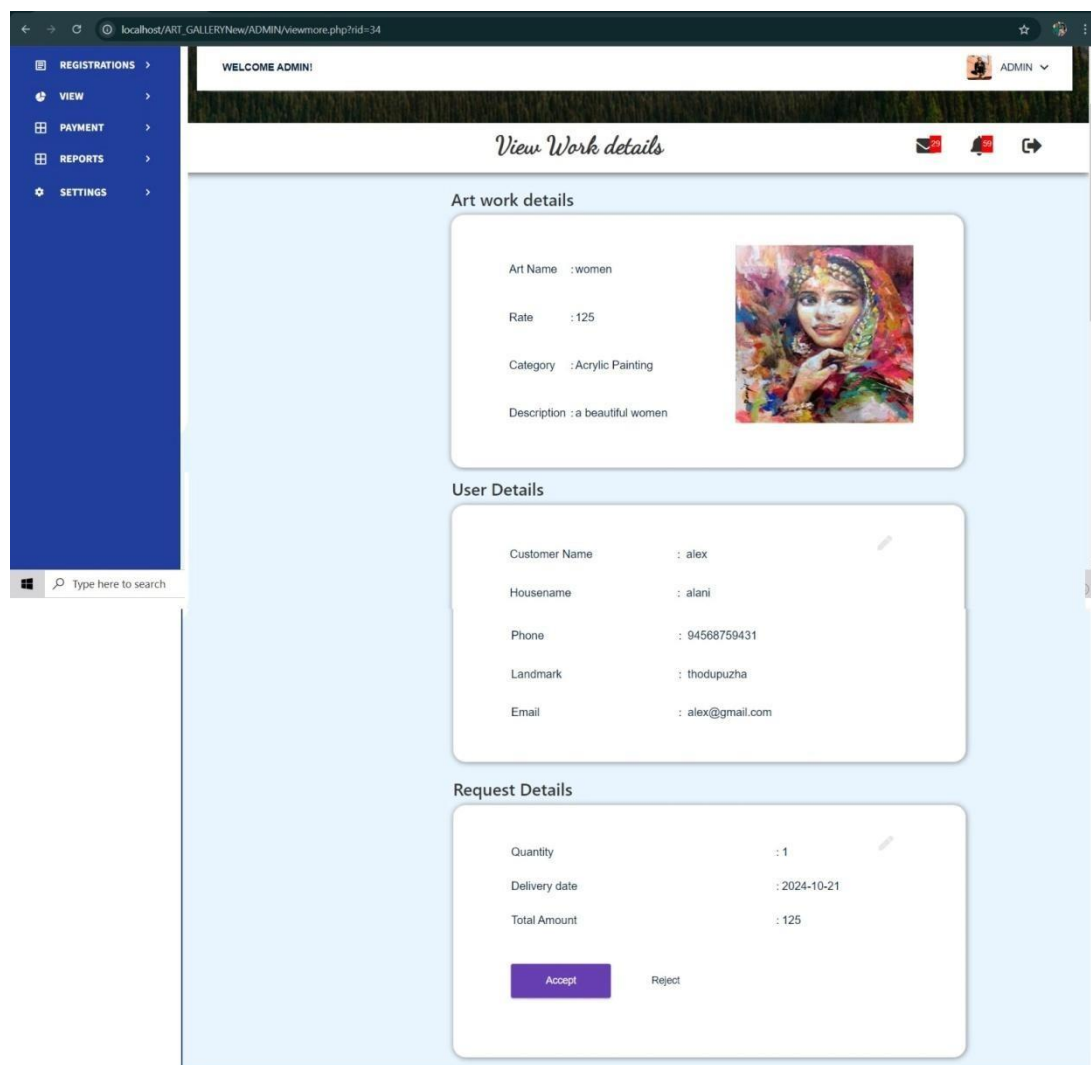
## ADMIN HOME PAGE



## VIEW REQUEST PAGE



## REQUESTED ART AND CUSTOMER DETAILS PAGE



## NEW CATEGORY REGISTRATION PAGE

The screenshot displays the 'ART GALLERY' dashboard. On the left is a dark blue sidebar with a menu containing: Dashboard (with a notification badge), Components, REGISTRATIONS (expanded), Location, Category, Artwork, VIEW (expanded), View Location, View Category, View Artwork, View Request, PAYMENT, REPORTS, and SETTINGS. The main content area has a header with 'WELCOME ADMIN!' and a user profile 'ADMIN'. Below the header is a 'Category Registration' form with a purple 'VIEW' button. The form includes a 'CategoryName' field with a placeholder 'Name', an 'image' field with a 'Choose File' button and 'No file chosen' text, and 'Submit' and 'Cancel' buttons. At the bottom of the main area is a light blue banner with the text 'A PLACE WHERE ART UNITES.' and 'Art gallery' on the right.

## NEW ARTWORK REGISTRATION PAGE

The screenshot displays the 'ART GALLERY' dashboard with the 'Artwork Registration' form. The sidebar menu is identical to the previous screenshot, but the 'VIEW' section is expanded to show 'View Location', 'View Category', 'View Artwork', and 'View Request'. The 'Artwork Registration' form features a purple 'VIEW' button and includes fields for 'Work Name' (placeholder 'work Name'), 'Image' (with 'Choose File' button and 'No file chosen' text), 'Description', 'Amount' (placeholder 'Amount'), and 'Category' (a dropdown menu with 'select category' as the selected option). 'Submit' and 'Cancel' buttons are at the bottom of the form.